

Typhoid fever in travelers: who should we vaccinate?

Steinberg E, Frisch A, Rossiter S ,McClellan J , AckersM , Mintz E

Infection with *Salmonella Typhi* causes an estimated 16 million cases of typhoid fever worldwide each year, including 200 - 300 travel-associated cases in the United States. Vaccination of travelers is an important method of prevention. Destination and estimated length of stay abroad have been used as a guide for determining which travelers to vaccinate. To clarify indications for typhoid immunization, we reviewed data from all cases of *S. Typhi* reported to the U.S. Centers for Disease Control and Prevention's National Typhoid Fever Surveillance System between 1994 and 1999. From 1994 to 1999, 1,166 laboratory-confirmed cases of acute *S. Typhi* infection were reported by 41 states and 2 territories. California (29%) and New York (24%) reported the most cases. The median age was 22 (range, 0 - 94 years); 26% were children <10 years old; 636 (55%) were male; 866 (85%) were hospitalized; and 9 (0.8%) died. In total, 855 (73%) infections were acquired abroad. Travel to six countries, India (30%), Pakistan (13%), Mexico (10%), Bangladesh (6%), Haiti (6%), and the Philippines (5%) accounted for 70% of cases. Among 150 persons who reported their reason for travel, 115 (77%) infections occurred in persons visiting family, 21 (14%) in persons immigrating to the U.S., 14 (9%) in tourists, and 4 (3%) in business travelers. Only 27 (.03%) persons reported vaccination. For 472 travelers who traveled to a single country and reported duration of stay, 24 (5%) stayed < 1week, 76 (16%) < 2weeks, 132 (28%) <3 weeks, 227 (48%) <1 month, and 288 (61%) <6 weeks. In conclusion, a substantial number of typhoid cases in the U.S. occur among persons who travel for six weeks or less. Vaccination should be considered even for short-term travel to high risk areas. Travelers to the Indian subcontinent, children, and persons visiting family should be targeted for prevention.

Suggested citation:

Steinberg E, Frisch A, Rossiter S ,McClellan J , AckersM , Mintz E. Typhoid fever in travelers: who should we vaccinate? The American Society of Tropical Medicine and Hygiene. 2000.